Sight for Sore Eyes

Join an architect with low vision on a building walk-through

By Stuart L. Knapp, FIAA

The main entrance to the new building, on the other hand, is brightly lit with an atrium so there is no adjustment at the entrance from the exterior. The extreme change in illumination level, however, has moved to the points where the action is joined by internal corridors, elevators, and other spaces. Providing transitional lobby spaces and lighting could have addressed this problem to everyone’s benefit.

Coping with Glare and Contrast

Everyone has experienced glare, especially from headlights in the darkness or sun in one’s eyes through a window. Most low vision ophthalmic conditions exacerbate the glare phenomenon to the point where it is impossible for a person to see much of anything in the field of vision. Within our courthouse, glare is particularly disturbing from reflections on polished terrazzo flooring from windows admitting afternoon sun directly into the line of sight; and in offices and conference rooms from windows in the vision field just out of the direct line of sight. Another source of glare is lighting fixtures, where the bulbs themselves are visible despite various baffles. These examples of glare demonstrate the role of excessive contrast; however, some contrast is necessary for us to distinguish objects one from another, such as text and forms. But while excessive contrast can produce glare, insufficient contrast can reduce clarity of an image. In the courthouse, for example, the jury assembly room has a virtually monochromatic (primarily off-white) color scheme of room surfaces—walls, floors and ceilings—and furniture upholstery that blends into a field of indistinct forms. Similarly, in some of the corridors and public toilet rooms, the light color monochrome avoids a “busy” visual effect but is functionally vexing.

Developing Design Guidance

Because the characteristics of low vision and the potential for design response can vary with the vision disorder and degree of vision loss, there has been no standard published to address the problem. Partially as a result of the experiences reported here, the National Institute of Building Sciences www.nibs.org convened a full 2010 workshop to begin to shape design guidelines. Medical clinicians, researchers and designers gathered to identify the possibilities for universal design improvements to accommodate low vision based on evidence and science.

As a result of this workshop, the Institute established the Low Vision Design Committee. We first convened in November 2011, and are actively developing design guidance, working with members of the American Institute of Architects, the Illuminating Engineering Society of North America and the U.S. Access Board to identify needed research and provide assistance in incorporating sensitivity to the growing population of people with low vision and to ensure their safety and ability to function within all building types. Our efforts have been generously funded by the Holden B. and Maurice Rothchild Foundation www.drbroothchildfoundation.com and, more recently, the James H. McCue Lighting Research Foundation www.mccuefoundation.org.

If you would like to join our efforts, please visit the Low Vision Design Committee portion of the Institute’s website, www.nibs.org/lvd or contact the Institute’s program director, Stephanie Stibbs atstibs@nibs.org. We welcome your interest—and especially—your help. 

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References: The Low Vision Design Committee’s website www.nibs.org/lvd offers a number of valuable references on low vision and accessible design, including proceedings from the 2010 Workshop on Improving Building Design for Persons with Low Vision.